



**Product Data Sheet &
General Processing Conditions**

**RTP 3499-4 X 91192 A
Liquid Crystal Polymer (LCP)
High Heat Encapsulation Grade**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Specific Gravity	1.70	1.70	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0020 - 0.0040 in/in	0.20 - 0.40 %	D 955

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	1.7 ft-lbs/in	91 J/m	D 256
unnotched 1/8 in (3.2 mm) section	3.5 ft-lbs/in	187 J/m	D 4812
Tensile Strength	14500 psi	100 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	1.90 x 10 ⁶ psi	13100 MPa	D 638
Flexural Strength	23000 psi	159 MPa	D 790
Flexural Modulus	1.80 x 10 ⁶ psi	12411 MPa	D 790

ELECTRICAL

Dielectric Constant, 1 MHz, Dry	3.6	3.6	D 150
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THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	560 °F	293 °C	D 648
@ 66 psi (455 kPa)	> 572 °F	> 300 °C	D 648
Ignition Resistance* Flammability**	V-0 @ 1/16 in	V-0 @ 1.5 mm	D 3801

PROPERTY NOTES

Data herein is typical and not to be construed as specifications.

Unless otherwise specified, all data listed is for natural or black colored materials. Pigments can affect properties.

* This rating is not intended to reflect hazards of this or any other material under actual fire conditions.

** Values per RTP Company testing.

GENERAL PROCESSING FOR INJECTION MOLDING

	English	SI Metric
Injection Pressure	10000 - 18000 psi	69 - 124 MPa
Melt Temperature	685 - 750 °F	363 - 399 °C
Mold Temperature	150 - 200 °F	66 - 93 °C
Drying	8 hrs @ 300 °F	8 hrs @ 149 °C
Dew Point	-20 °F	-29 °C

PROCESSING NOTES

The key to successfully molding this material is to start mold open cycles as soon as the screw reaches its retracted position.

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This information is intended to be used only as a guideline for designers and processors of modified thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.

Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein.

Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.

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